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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/808,526	03/25/2004	Makoto Nagai	65933-076	5937

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McDERMOTT, WILL & EMERY
600 13th Street, N.W.
Washington, DC 20005-3096

EXAMINER

HUYNH, NAM TRUNG

ART UNIT	PAPER NUMBER
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2617

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	01/08/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No. 10/808,526	Applicant(s) NAGAI, MAKOTO	
	Examiner Nam Huynh	Art Unit 2617	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 November 2006.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,2,4-7,9,10 and 12 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2,4-7,9,10 and 12 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>12/5/06</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 11/8/2006 has been entered.

Response to Amendment

This office action is in response to amendment filed on 11/8/2006. Of the pending claims 1, 2, 4-7, 9, 10, and 12, claims 1, 4-6, and 9 have been amended and claim 12 has been added.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.

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4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

4. Claims 1, 4-6, 10, and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sano (US 2004/0180695) in view of Chi et al. (US 2003/0203736).

Sano discloses a base station that comprises the following:

- A receiver that receives reception signal quality information transmitted from the mobile station that includes a signal-to-interference ratio and a delay spread (permissible delay time detector) (pages 1,2, paragraph 11, 15).
- A setting unit (decision unit) that selects the modulation method using the SIR and the delay spread measured by the mobile station (page 5, paragraph 80).
- A transmission control unit (instruction unit) that transmits control information to the mobile station using input from the setting unit (modulation method) (page 6, paragraph 93).

The invention of Sano pertains to adaptively and variably setting modulation methods of a base station based upon signal quality information, which includes a delay spread, transmitted from the mobile station (terminal) and does not explicitly disclose the determination of the number of channels per frame to be allocated to the terminal based on the permissible delay so that the communication rate as determined by the modulation method and the number of channels approaches a predetermined value.

Chi et al. discloses a method for supporting traffics with different quality of service (Qos) by a High Speed Downlink Packet Access System (HSDPA) (abstract). In the scope of the invention, Qos parameters are mapped onto transport channels which includes data scheduling where when new data are being transmitted, the number of

the physical channels may be selected based on the amount of data and the modulation and encoding method selected currently by a adaptive modulation and encoding function (page 12, paragraph 181). The mapped parameters of the Qos of the transport channels comprise transport channel attributes, which takes into consideration and includes the maximum bit rate (predetermined value) and a delay requirement of the transport channel data (permissible delay time) (page 8, paragraph 58). Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the base station or network of Sano, to include Qos parameters for transport channels, as taught by Chi et al., in order for the traffics on transport channels to reach a required preset Qos, which in turn enhances the quality of the services provided by the network.

5. Claims 2, 7, and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sano (US 2004/0180695) in view of Chi et al. (US 2003/0203736) as applied to claims 1, 4-7, and 9 above, and further in view of Lohman et al. (US 2003/0083104).

The combination of Sano and Chi et al. discloses the limitations set forth in claims 1, 4-6, and 9, and additionally teaches the selecting a number of channels based on a modulation method based on Qos parameters of a transport channel, but does not explicitly disclose that this selection is based on a permissible delay time threshold.

Lohman et al. discloses a radio communications system in which a base station receives a message containing addressing information corresponding to one of a plurality of terminals (page 1, paragraph 6). The addressing information comprises a delay index that is compared to a delay-values (maximum or threshold values) allowed

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for the cell to maintain certain Quality of Service-which is often used as a Service Level Agreement (page 3, paragraph 35). With the receipt of this information, the base station can direct modulation scheme and coding level (page 1, paragraph 5). Therefore it would have been obvious to one of ordinary skill in the art to modify the combination of Sano and Chi et al. to compare the delay with a threshold and choose a modulation scheme, as taught by Lohman et al., in order to guarantee a certain level of Quality of Service for the service requested by the mobile station.

Response to Arguments

6. Applicant's arguments with respect to claims 1, 2, 4-7, 9, 10, and 12 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Nakabayashi (US 2004/0038685)

Galyas (US 6,687,226)

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nam Huynh whose telephone number is 571-272-5970.


The examiner can normally be reached on 8 a.m.-5 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, George Eng can be reached on 571-272-7495. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

NTH
12/22/06


GEORGE ENG
SUPERVISORY PATENT EXAMINER